

WHAT IS CLAIMED IS:

[C001] 1. An X-ray detector assembly, comprising:

- a substrate;
- a detector matrix array disposed on said substrate;
- a scintillator material disposed on said detector matrix array; and
- an encapsulating coating disposed on said scintillator material, wherein said encapsulating coating comprises a combination of a mono-chloro-poly-para-xylylene layer and a poly-para-xylylene layer.

[C002] 2. The detector according to claim 1, wherein said mono-chloro-poly-para-xylylene layer has a thickness ranging from about 2 microns to about 10 microns and said poly-para-xylylene layer has a thickness ranging from about 0.01 microns to about 3 microns.

[C003] 3. The detector according to claim 1, wherein said poly-para-xylylene layer is disposed over said scintillator material and said mono-chloro-poly-para-xylylene layer is disposed over said poly-para-xylylene layer.

[C004] 4. The detector according to claim 3, wherein said mono-chloro-poly-para-xylylene layer has a thickness ranging from about 2 microns to about 10 microns and said poly-para-xylylene layer has a thickness ranging from about 0.01 microns to about 3 microns.

[C005] 5. An X-ray detector assembly, comprising:

- a substrate;
- a detector matrix array disposed on said substrate;
- a scintillator material disposed on said detector matrix array; and
- an encapsulating coating disposed on said scintillator material, wherein said encapsulating coating comprises a poly-para-xylylene layer disposed

over said scintillator material and a mono-chloro-poly-para-xylylene layer disposed over said poly-para-xylylene layer.

[C006] 6. The detector according to claim 5, wherein said mono-chloro-poly-para-xylylene layer has a thickness ranging from about 2 microns to about 10 microns and said poly-para-xylylene layer has a thickness ranging from about 0.01 microns to about 3 microns.

[C007] 7. An X-ray detector assembly, comprising:

a substrate;

a detector matrix array disposed on said substrate;

a scintillator material disposed on said detector matrix array; and

an encapsulating coating disposed on said scintillator material, wherein said encapsulating coating comprises a poly-para-xylylene layer having a thickness ranging from about 0.01 microns to about 3 microns disposed over said scintillator material and a mono-chloro-poly-para-xylylene layer having a thickness ranging from about 2 microns to about 10 microns disposed over said poly-para-xylylene layer.